

R. S. MILLER.
MAIL BAG CATCHER.
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983,744.

Patented Feb. 7, 1911.

2 SHEETS—SHEET 1.

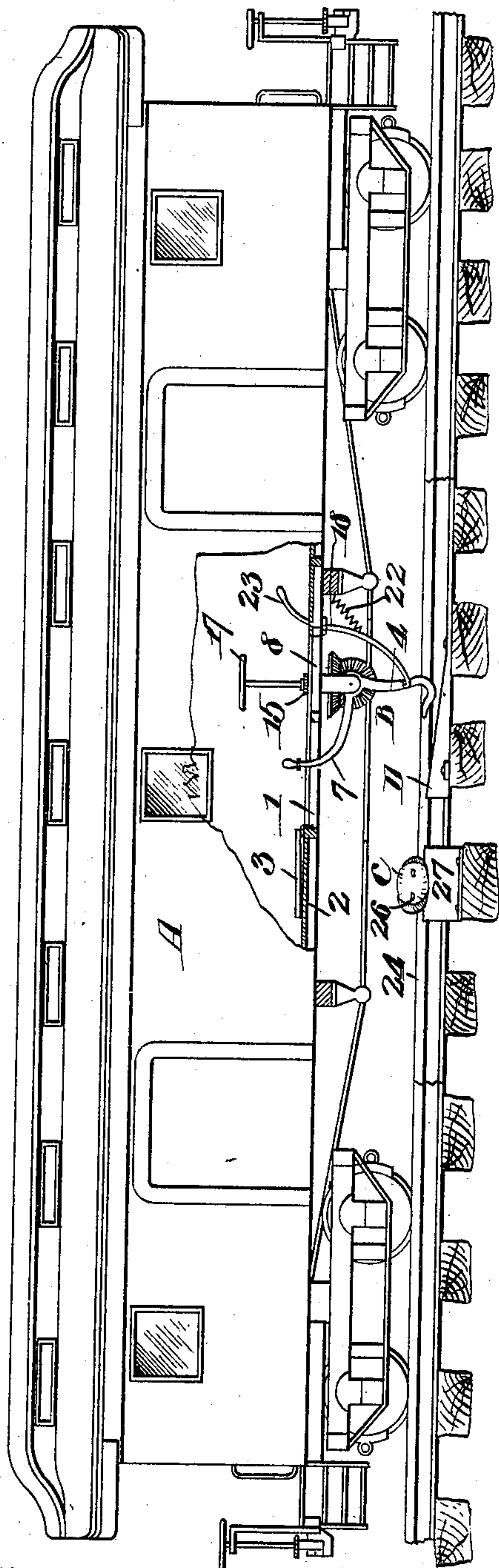


Fig. 1.

Witnesses
A. B. C.
E. B. D.

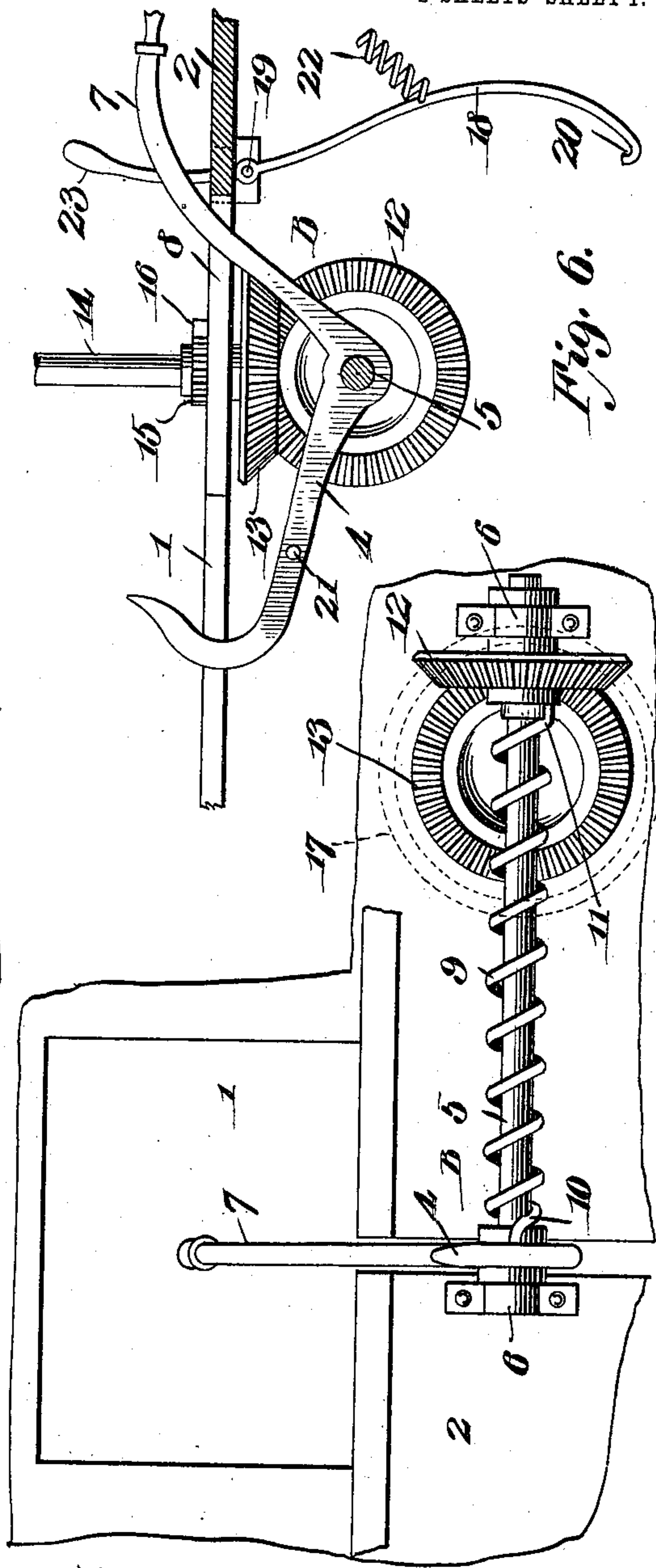


Fig. 6.

Fig. 7.

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MAIL-BAG CATCHER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RAY S. MILLER, a citizen of the United States, residing at Red Sulphur Springs, in the county of Monroe and State of West Virginia, have invented new and useful Improvements in Mail-Bag Catchers, of which the following is a specification.

This invention relates to an apparatus for picking up mail bags from postal stations along the road by a moving train.

The invention has for one of its objects to improve and simplify the construction and operation of apparatus of this character, so as to be comparatively simple and inexpensive to manufacture and keep in operative condition, reliable and efficient in use, readily manipulated, and capable of being easily installed without requiring material alterations in the mail cars.

Another object of the invention is the provision of a catching device or hook mounted under the floor of a car, so as to pick up mail bags positioned on the track between the rails thereof.

Another object of the invention is the employment of simple and effective means for setting the device and releasably holding the same in position.

A further object is the provision of novel means for supporting a mail bag on the track, so that it can be caught up by the hook without danger of missing.

With these objects and others in view, as will appear as the description proceeds, the invention comprises the various novel features of construction, and arrangement of parts, which will be more fully described hereinafter, and set forth with particularity in the claims appended to the case.

In the accompanying drawings, which illustrate one embodiment of the invention:—Figure 1 is a side view of a mail car, partially broken away to illustrate the bag catching device, the hook being set and about to pick up the mail bag; Fig. 2 is a plan view of a portion of a track, showing the mail bag holder and the hook releasing device; Fig. 3 is a transverse section on line 3—3 of Fig. 2; Fig. 4 is an enlarged rear view of the catching device; Fig. 5 is a sectional view on line 5—5 of Fig. 4, showing the catching hook in set position by full

lines, and in released position by broken lines; Fig. 6 is a similar section, showing the hook in its final position after catching a bag; Fig. 7 is a bottom plan view of the catching device and of a portion of the car floor.

Similar reference characters are employed to designate corresponding parts throughout the several views.

Referring to the drawings, A designates a mail car, which is provided with an opening 1 in the floor 2 thereof, said opening being normally closed by a trap door 3. This opening may be arranged adjacent the center of the car and is for the purpose of permitting the mail bag to be taken off the catching device designated generally by B. This device B comprises a hook 4 which is mounted to swing on a horizontal shaft 5 extending transversely under the car floor and suitably mounted in bearings 6. This hook is provided with an upwardly extending handle 7 which moves back and forth in a slot 8 formed in the floor of the car and extending outwardly from the opening 1, and by means of this handle the hook can be moved to set position from a point within the car. Coiled around the shaft 5 is a helical torsional spring 9, which has one end 10 connected with the hook 4 so that when the hook is set, the spring will be under tension. The opposite end 11 of the spring is connected with a tension adjusting device, which can be manipulated from a point within the car, such device consisting of a miter gear 12 with which meshes a miter gear 13 fastened on the lower end of a vertical shaft 14 that extends through the floor of the car. Around this shaft is a ratchet wheel 15, with which engages a locking pawl 16 fastened to the floor of the car and arranged in such a manner that the shaft 14 can be turned by a hand wheel 17 in a direction to wind the spring 9 to give it the proper tension, the spring having its end 11 anchored in the miter gear 12. The bag catching hook 4 is held in set position by the latch 18, which is fulcrumed at 19 on the car floor 2, at a point to one side of the catching device B. The lower end of this latch 18 is formed into a hook 20 which engages a projection 21 on the hook 4. The latch is provided with the spring 22 that is

under tension when the latch is holding the arm 4 in set position, so that when the arm 4 is given an initial movement, the latch will automatically release and be retracted by the spring 22. To set the latch, the same has a handle 23, projecting upwardly through the car floor, so as to be manipulated from a point within the car.

The mailing bag C is adapted to be supported in an approximately horizontal position and transversely of the track. On the rails 24 of the track are hooks 25, on which are engaged rings or attaching devices 26 secured to the ends of the mail bag, and on one of the cross ties of the track are spaced upwardly extending supports 27 which hold the middle portion of the bag above the cross ties, so that the hook 4 can catch under the bag, the hook passing through the supports 27. Just in advance of the mail bag is an inclined abutment D that is fastened to the cross ties and serves as a releasing device for the catching hook. This device is located centrally between the rails and is so positioned that the hook 4 on the mail car, when set, will strike the inclined face of the device D with the result that the latter will cause the hook to tilt rearwardly a distance sufficient to permit the holding latch 18 to automatically release itself, and after the latch releases the hook 4, the latter will pass off the top edge of the abutment D and engage under the middle of the bag and cause the latter to be picked up and carried upwardly to the opening 1 in the car floor, this upward movement of the hook being, of course, effected by the spring 9.

When the catching device is not in use, the hook 4 will be in the position shown in Fig. 6. As the mail station is approached, the catching device is set to operative position, and to do this, the handle 5 of the hook is thrown forwardly to move the hook from the position shown in Fig. 6 to that shown in Fig. 5. While the hook is held in this position, the latch 18 is manipulated so that the hook 20 thereof can be engaged with the projection 21 of the bag catching hook 4. The device is now set to pick up a bag and as soon as a train reaches the mail station, the hook 4 will be released from the catch by the device D and when the hook moves out of engagement with the said device, it will immediately pick up the bag.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction, and of the method of operation will be readily apparent to those skilled in the art to which the invention relates, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood

that the device shown is merely illustrative, and that such changes may be made when desired, as are within the scope of the claims.

Having thus described the invention, what I claim is:

1. The combination of a mail bag catching device mounted on the bottom of a car, with means for supporting a bag on the track over which the car passes, said means including devices with which the ends of the bag are releasably engaged, and fixed devices on which the middle portion of the bag rests.

2. The combination of a mail bag catching device mounted under the floor of a car, with means for attaching the mail bag between the rails of the track, and means for supporting the middle of the bag above the surface of the track.

3. The combination of a mail bag catching device mounted under the floor of a car, with means for attaching the mail bag between the rails of the track, means for supporting the middle of the bag above the surface of the track, and a device positioned on the track in advance of the mail bag to trip the bag catching device.

4. The combination of a traveling bag catching device, means detachably securing the ends of a mail bag on the rails of a track, spaced supports between the rails for holding the middle of the bag above the cross ties, and means adjacent said supports for throwing the catching device into operation.

5. The combination of a mail car, a catching device mounted under the car and including a hook, means for holding the hook in proximity to the track over which the car travels, means for supporting a mail bag on the track, and an abutment disposed at one side of the said bag holding device for throwing the said hook into operation to catch the bag.

6. The combination of a mail car, a catching device mounted under the car and including a hook, means for holding the hook in proximity to the track over which the car travels, means for supporting a bag horizontally between the rails of the track and raised above the cross ties of the latter to be in the path of the hook, and a stationary device on the track for rendering the hook operative.

7. The combination of a car having an opening in its floor, with a mail bag catching device disposed under the floor to pick up a bag from the track and carry it into the said opening, said device including a catching hook, a spring for operating the hook, and means within a car for setting the hook.

8. The combination of a car having an opening in its floor, with a mail bag catching device disposed under the floor to pick up a bag from the track and carry it into the said opening, said device including a catch-

ing hook, a spring for operating the hook, means within a car for setting the hook, and a device within the car for varying the tension of the spring.

5 9. The combination of a car having an opening in its floor, with a bag catching device mounted on the car, adjacent the opening to deliver a bag through the latter, said device including a swinging hook, an
10 automatically released latch for holding the hook in set position, and means for throwing the hook from set position.

10. The combination of a car having an opening in its floor, with a bag catching de-
15 vice mounted on the car, adjacent the opening to deliver a bag through the latter, said device including a hook, a spring for operating the hook, means for setting the hook against the tension of the spring, and a
20 spring retracted latch for holding the hook in set position.

11. The combination of a mail car, with a bag catching device mounted under the car, said device comprising a supporting shaft,
25 a swinging hook mounted thereon, an actuating spring coiled around the shaft and having one end connected with the hook,

means connected with the opposite end of the spring for tensioning the same, means within the car operating through the last 30 mentioned means for winding the spring, a handle connected with the hook and disposed within the car, and a latch for holding the hook in set position.

12. The combination of a mail car, with a 35 bag catching device mounted under the car, said device comprising a supporting shaft, a swinging hook mounted thereon, an actuating spring coiled around the shaft and having one end connected with the hook, 40 means connected with the opposite end of the spring for tensioning the same, a device within the car operating through the last mentioned means for winding the spring, a
45 pawl for locking the device, a handle connected with the hook and disposed within the car, and a latch for holding the hook in set position.

In testimony whereof I affix my signature in presence of two witnesses.

RAY S. MILLER.

Witnesses:

H. A. RYAN,
C. O. LOWE.